

ABSTRACT

[0030] A process for separating the components of a multi-component gas stream is disclosed. The multi-component gas stream is contacted with a solvent in an extractor to produce an overhead stream enriched with unabsorbed component(s) and a rich solvent bottoms stream enriched with absorbed component(s). The rich solvent bottoms stream is then flashed regenerate lean solvent and to recover the absorbed component(s) as an overhead stream, which is compressed to produce a product stream. The regenerated solvent is recycled to the extractor. A portion of the product stream is also recycled to the extractor to improve the overall purity of the product stream.